Serial No. 09/488,752

2. (amended) The display system recited in claim 1; wherein said graphics data and said frame buffer attribute data are stored in physically separate memories.

3. (amended) A display system, comprising:

a memory, containing graphics data, divided into logical regions, and frame

buffer attribute data; and

a regions system, that calculates which regions of said graphics data contain

data necessary for display of a block of pixels; wherein said regions are

fewer than all of said logical regions.

4. (amended) The display system recited in claim 3; wherein said graphics data and said frame buffer attribute data are stored in physically separate memories.

7. (amended) A method for selectively reading pixel data from a frame buffer memory array, comprising the steps of:

defining a plurality of regions of frame buffer memory, wherein each region

comprises memory to store graphics data for each pixel of a monitor;

storing frame buffer attribute data for each pixel in a memory, wherein said

frame buffer attribute data encodes which of said regions are to be

displayed on said monitor;

retrieving said frame buffer attribute data for a pixel from said memory;

calculating a subset of said regions of frame buffer memory that are required

to display said pixel on said monitor; and

retrieving from said frame buffer memory pixel data only from said subset of

regions of frame buffer memory that are required to display said pixel

on said monitor.

8. (amended) The method for selectively reading pixel data from a frame buffer

memory array as recited in claim 7; wherein said graphics data and said frame buffer

attribute data are stored in said frame buffer memory.

9. (amended) A method for selectively reading pixel data from a frame buffer

5 memory array, comprising the steps of:

defining a plurality of regions of frame buffer memory, each region further

comprising memory to store graphics data for each pixel of a monitor;

storing frame buffer attribute data for each pixel in a memory, encoding which

of said regions are to be displayed on said monitor using the frame

10 buffer attribute data;

defining groups of pixels as tiles;

selecting a tile for display on said monitor;

retrieving said frame buffer attribute data for said tile from said memory;

calculating a subset of said regions of frame buffer memory that are required

15 to display said tile on said monitor; and

retrieving from said frame buffer memory pixel data only from said subset of

regions of frame buffer memory that are required to display said tile on

said monitor.

10. (amended) The method for selectively reading pixel data from a frame buffer

20 memory array as recited in claim 9; wherein said graphics data and said frame buffer

attribute data are stored in said frame buffer memory.

25